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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,682	03/13/2001	William J. Labarge	DP-302561/DEP-0128	3642

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EXAMINER

JOHNSON, EDWARD M

ART UNIT PAPER NUMBER

1754

DATE MAILED: 11/06/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

mx-13

Office Action Summary

Application No.

09/805,682

Applicant(s)

LABARGE ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-16,19,20,24-29 and 31 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☒ Claim(s) 15 and 25-29 is/are allowed.

- 6) ☒ Claim(s) 1,4-14,19,20,24 and 31 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-14, 16, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabilon et al. 5,051,392.

Regarding claims 1 and 30, Mabilon '392 discloses a catalyst for nitrogen oxides (see column 1, lines 18-20) comprising an impregnated zeolite (see column 3, line 30 and column 4, line 22) and a porous layer containing calcium and neodymium (see abstract).

Regarding claim 16, Mabilon '392 discloses a catalyst for nitrogen oxides (see column 1, lines 18-20) comprising an impregnated zeolite (see column 3, line 30 and column 4, line 22), a porous layer containing mixtures of calcium and neodymium (see abstract), zeolite (see column 3, line 54), 0-35% zirconium (see column 2, lines 32-37), and ceramic (see column 3, line 26).

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Regarding claims 5-6, Mabilon '392 discloses calcium (see abstract).

Regarding claims 7-8, Mabilon '392 discloses neodymium (see abstract).

Regarding claims 9-12, Mabilon '392 discloses 0-35% zirconium (see column 2, lines 32-37).

Regarding claims 13-14, Mabilon '392 discloses mixing ammonia with alumina (see column 5, lines 64-68 and Example 16).

Regarding claim 31, Mabilon '392 discloses silicon, titanates, and zirconium (see column 3, lines 28-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, 16, 19-20, 24, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell 4,988,660 in view of Brownscombe 5,053,372.

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Regarding claim 1, Campbell '660 discloses catalysts comprising neodymium (see column 3, line 45) and calcium (see column 7 lines 52-60).

Campbell fails to disclose alkaline earth exchanged zeolite.

Brownscombe '372 discloses alkaline earth exchanged zeolite (title, abstract).

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the alkaline earth exchanged zeolite of Brownscombe in the catalyst of Campbell because Brownscombe discloses his alkaline earth exchanged zeolite as shape selective catalyst (see column 1, line 20) and as supports for catalytic components (see column 2, lines 28-30).

Regarding claims 16, 20, and 24 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18), the use of binder (see column 7, lines 38-40). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation (at least about 2% may include values close or equal to zero).

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Regarding claims 4 and 19 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation.

Regarding claim 31, Campbell discloses silica and titania (see column 8, lines 14-15).

5. Claims 1, 4, 16, 19-20, 24, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell 4,988,660 in view of Wormsbecher 4,929,338.

Regarding claim 1, Campbell '660 discloses catalysts comprising neodymium (see column 3, line 45) and calcium (see column 7 lines 52-60).

Campbell fails to disclose alkaline earth exchanged zeolite.

Wormsbecher '338 discloses alkaline earth exchanged zeolite (abstract and paragraph bridging columns 4-5).

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the alkaline earth exchanged zeolite of Wormsbecher in the catalyst of Campbell because Wormsbecher discloses his alkaline earth exchanged zeolite in a catalytic cracking catalyst and

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process (title) to obtain cracked products of lower molecular weight such as gasoline and light cycle oil (see column 5, lines 18-20).

Regarding claims 16, 20, and 24 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18), the use of binder (see column 7, lines 38-40). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation (at least about 2% may include values close or equal to zero).

Regarding claims 4 and 19 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation.

Regarding claim 31, Campbell discloses silica and titania (see column 8, lines 14-15).

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Demmel 5,545,604.

Regarding claim 24 Demmel '604 discloses a catalyst comprising 50-95% calcium oxide in the final product (see column

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15, lines 49-53), alumina as binder, and 40% alumina (see column 31-33 and 36-38), wherein alumina also serves as support of the other materials (see column 2, lines 45-46).

Demmel fails to disclose an alkaline earth exchanged zeolite.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an alkaline earth exchanged zeolite because Demmel discloses alkaline earth impregnated zeolites for a density better suited for homogeneous fluidization (see column 3, lines 21-28 and column 6, lines 7-14).

Allowable Subject Matter

7. Claims 15 and 25-29 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: Although calcium oxide, neodymium catalysts with aluminum oxide binders appear to be well known in the art, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to use an ammonium aluminum oxide sol binder in an amount of at least about 2 wt% and less than about 6 wt% in the outer layer of the catalyst of the instant claim 15. It also would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine calcium and neodymium compounds with a support

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followed by combination with a binder and washcoating as in the method of the instant claim 25.

Response to Arguments

9. Applicant's arguments filed 9/11/02 have been fully considered but they are not persuasive.

It is argued that the heart of the Examiner's rejections is based upon the position that "at least about 50 wt%" includes a range of 0.1 to about 35 wt%". This is not persuasive because Applicant asserts that even a small change can have unexpected effects without actually asserting that such an effect has been achieved by Applicant. Further, and in any case, the instant claim is not considered a change from the prior art, as Applicant appears to suggest. Rather, it is not considered unreasonable for one skilled in the art to interpret the claimed range of "at least about 50%" as incorporating at least some of the values encompassed by the prior art range of "0.1 to about 35%", as noted by the Examiner in the previous rejection. Claims must be given their broadest reasonable interpretation. In re Morris, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997).

It is argued that because of the inherent unpredictability associated with catalysts. This is not persuasive because Applicant asserts that the disclosed prior art range "ends at

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35%" when it does not, since "about" 35% is reasonably interpreted as incorporating values above 35%.

It is argued that the Examiner has stated no basis for the assertion that "[I]t is not considered unreasonable". This is not persuasive because the basis for the assertion is that the values about 35% and about 50% are reasonably close enough to incorporate some of the same values, compared to values further apart. It is noted that the features upon which applicant relies (i.e., values which are necessarily above about 35%) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that the Examiner contends that "at least about 2% includes values close to or equal to zero". This is not persuasive for the reasons above and because Applicant's claim does not suggest otherwise. It is noted that the features upon which applicant relies (i.e., a value necessarily above zero) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that furthermore, as was stated in Amendment D filed with the RCE. This is not persuasive because the disclosed prior art ingredients are the same as the claimed ingredients, the Examiner has not taken Official Notice of a NO_x occluding catalyst, and NO_x occlusion is an intended use recitation, as noted in previous Office Actions. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The claim lacks novelty because the instantly claimed catalyst and the catalyst of the prior art have the same ingredients. Applicant does not appear to allege any difference between the instantly claimed catalyst and that disclosed in Campbell other than the intended use of NO_x reduction. Nor does Applicant appear to allege that the catalyst disclosed in Campbell does not, in fact, occlude NO_x.

It is argued that furthermore, claim 1 of the present application claims a NO_x occluding catalyst structure comprising

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an alkaline earth exchanged zeolite. This is not persuasive because the prior art relied upon for claims 1 and 24 did not include this limitation, since it is added to those claims by amendment (see above).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M.

Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ
November 1, 2002



STEVEN BOS
PRIMARY EXAMINER
GROUP 1100